American Water Works Association

The Authoritative Resource on Safe Water SM

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US Environmental Protection Agency
Docket ID No. EPA-HQ-OW-2007-1126
EPA Docket Center (EPA/DC)
Water Docket, MC 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Draft Gulf Hypoxia 2008 Action Plan For Reducing, Mitigating and Controlling Hypoxia in the Northern Gulf of Mexico and Improving Water Quality in the Mississippi River Basin (OW-2007-1126)

Dear Docket:

The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to the improvement of drinking water quality and supply. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our 60,000 plus members represent the full spectrum of the drinking water community: treatment plant operators and managers, environmental advocates, engineers, scientists, academicians, and others who hold a genuine interest in water supply and public health. Our membership includes more than 4,700 utilities that supply roughly 80 percent of the nation's drinking water.

AWWA appreciates the opportunity to comment on the above referenced document. The November 20th *Federal Register* notice on the availability of this document for public comment represents an opportunity for the water sector to provide its perspective on the potential impacts of excess nutrient loading on water treatment and quality. AWWA strongly supports the 2008 Action Plan and additionally, the Agency's efforts to use the Clean Water Act (CWA) as a tool to protect public drinking water supplies. Currently, the Safe Drinking Water Act (SDWA) and CWA requirements and implementation of both Acts sometimes do not adequately protect drinking water sources, especially when different state regulatory agencies are responsible for implementation. While the SDWA regulates the quality of treated drinking water, the CWA should protect the source water. Protection of water bodies that are sources of drinking water under the CWA is important for achieving the public health goals of the SDWA on a consistent basis. These public health goals should be achieved without placing excessive (and in some cases, unachievable) financial and technological burdens of additional water treatment on those supplying and consuming drinking water.

The Draft Gulf Hypoxia 2008 Action Plan was originally developed to provide guidance to federal agencies, as well as state and tribes located within the Mississippi/Atchafalaya River Basin, for reducing, mitigating and controlling hypoxia in the northern Gulf of Mexico and improving water quality in the Mississippi River Basin. As stated in the Plan, the size of the hypoxic zone in the Gulf of Mexico is approximately 20,500 square kilometers, making it the second largest hypoxic zone in the world. Hypoxia occurs when an excess of nutrients such as nitrogen and phosphorous cause an excessive algae growth in a body of water; in this case, the Gulf of Mexico. These excess nutrients are conveyed to the Gulf via the Mississippi and the Atchafalaya Rivers. Nutrients enter into these rivers though various pathways including discharges from industrial manufacturing plants and wastewater treatment plants, runoff from both agricultural and developed land containing fertilizers, atmospheric deposition, and soil erosion. The resultant algae growth can increase the concentrations of Total Organic Carbon (TOC). Increased TOC can lead to increased Disinfection By-Products (DBPs) and to compliance problems with DBP regulations. The algae growth can also increase the concentrations of taste and odor (T&O) compounds and/or produce algal toxins.

Source waters containing depressed oxygen levels and elevated levels of TOC, T&O compounds, and algal toxins require specialized treatment. One method for treating organics includes the use of activated carbon to adsorb the compound to the interior surface of the activated carbon as the water passes through the carbon particles. Another method commonly used is the addition of an oxidant, such as potassium permanganate, ozone, chlorine, or chlorine dioxide to the water. Many of the cities located along the Mississippi and Atchafalaya Rivers use the rivers as a drinking water source and, therefore, are directly affected by the increased nutrient loadings currently being observed. The majority of these utilities already have a treatment process in place to address TOC and T&O compounds; however, during the summer months, elevated levels of nutrients in the source water result in higher than normal concentrations. To produce drinking water of an acceptable quality to EPA and consumers, increased levels of treatment, through the addition of an oxidant or adsorption material, are sometimes required. This additional level of treatment means the increases operating costs, and this rise in costs can have a significant effect on the overall budget of the water utility.

As stated in the 2008 Action Plan, efforts should be made to broaden the monitoring of nutrient loading in order to better understand potential impacts on drinking water sources. Efforts should also be made to complete and implement comprehensive nutrient reduction strategies focusing on nitrogen and phosphorous at both the federal and state level. These efforts should strive to reduce the nutrient loadings to the Mississippi and Atchafalaya Rivers as well as the Gulf of Mexico, which will lower the potential impact of TOC, T&O compounds, and algae blooms on water utilities that use these water bodies as drinking water sources. A decrease in the nutrient loadings would reduce the amount of chemical treatment required to adequately treat these source waters. It is important that the strategies developed as part of the 2008 Action Plan be applied to the entirety of the watershed, as a regionally comprehensive approach will be required to adequately address the problems that result from excess nutrient loading. In summary, decreased

water quality due to nutrient-rich runoff or other related factors could challenge water treatment plants in meeting drinking water treatment regulations.

If you have any questions about these comments, please feel to call Alan Roberson or me in our Washington Office at 202-628-8303.

Yours Sincerely,

Thomas W. Curtis
Deputy Executive Director

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